

Title (en)

Detecting an analyte in the gaseous or vapour phase by bioelectrochemical reactions and media therefor.

Title (de)

Nachweis eines Analyten in Gasphase oder Dampfphase mit bioelektrochemischen Reaktionen und Medien dafür.

Title (fr)

Déterminer un analyte en phase gazeuse ou vapeur avec des réactions bio-électrochimiques et supports utilisables.

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Application

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Priority

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Abstract (en)

A method of determining an analyte in the gaseous or vapour phase and in which a bioreceptor or biomimic is retained at an electrode. The bioreceptor or biomimic is preferably retained at a support at the electrode which comprises a solid or gel matrix of an electrolyte, especially organic salt electrolytes. Electrochemical detection of analytes in this way has several advantages over existing methods which rely on solution monitoring. For example gas sensors can be prepared for monitoring an analyte by the occurrence of a reaction with a bioreceptor or biomimic, in addition to monitoring the presence of toxins due to inhibition of the bioreceptor or biomimic reaction. Furthermore, the invention enables gas or vapour analyte monitoring with increased sensitivity and speed and greater stability of the sensors can be achieved. The invention also relates to novel media for carrying out bioelectrochemical reactions.

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Cited by

GB2290382A; EP0634488A3; GB2312289A; GB2312289B; US5922616A; WO9616185A1; US7276146B2; US7399400B2; US7695609B2; US9017544B2; US9638658B2; US10408784B2; US7276147B2; US9017543B2; US9658183B2; US10386322B2

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